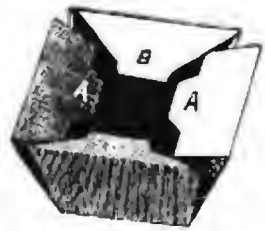
rubber-lined pocket in which to collect the soiled squares of muslin, which the patient should carefully burn on his return home.

Frame of metal for paper sputum-cup.



Paper sputum-cup, to be burned.

At the conclusion of the lecture the nurses asked Dr. Knopf about diet, and he showed them his way of preparing a raw egg. In a wine-glass he placed about half a teaspoonful of lemon-juice, a pinch of pepper and of salt, and upon this broke carefully a fresh raw egg. Another layer of lemon-juice with pepper and salt made the egg easy to swallow. The nurses present voted it delicious. Besides scraped beef, whole-wheat bread, and raw eggs, Dr. Knopf dwelt strongly upon the necessity of plenty of pure water.

HOME ECONOMICS

By ALICE P. NORTON

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(Continued from page 364)

IV. PROTEIDS AND THEIR USES.

If one takes half a cup of flour and mixes with it about two tablespoonfuls of water, stirring it in slowly and thoroughly, then with the hands works the mass into a smooth, elastic dough, and washes it under running water, or in a bowl with frequent change of water, until the washwater loses its milky appearance and runs clear, there will remain in the hands a sticky, elastic mass, grayish or light brown in color—the gluten of the wheat. If this gluten be dried and weighed, and the weight compared with that of the flour used, it will be seen to constitute about eleven per cent. of the flour. If some of the freshly prepared

gluten be baked for fifteen minutes in an oven hot enough for baking bread, it will rise to several times its bulk, and will come from the oven very crisp and porous.

If beside the gluten we place the white of an egg, if we scrape a piece of lean meat so that the muscle-fibres are separated from the connective tissue and add the scrapings to our collection, and if we add some curd of milk, obtained by heating gently some sour milk and straining the curd from the whey, or by adding a few drops of acid, such as vinegar or lemon-juice, or some rennet, to sweet milk, we shall have before us four of the chief representatives of the class of foods called proteids.

At first sight there will seem to be little in common between the tough, elastic gluten, the soft meat fibres, the white, firm curd, and the transparent, semi-liquid egg.

Shake up a portion of the white of egg with cold water, strain or filter it, and heat the filtrate (the liquid that runs through the filter or strainer). It becomes cloudy, and white particles appear, showing that the albumin had dissolved in the cold water and is insoluble in hot water. Soak the meat in a little cold water, strain, and heat as before. A similar result is obtained. Some of the meat is soluble in cold water, but a much larger portion is left behind in the strainer undissolved than in the case of the egg. The gluten and the milk-curd will not dissolve at all in water.

The effect of heat on the several substances is similar in that all are toughened by prolonged heating. The egg and the albumin in the meat are coagulated even by a moderate heat.

If we try certain chemical tests upon these various substances, we shall find their relationship much more clearly established. A mixture of nitrates of mercury known as Millon's reagent, added to any one of them will, upon heating, give a brick-red color. The addition to any of them of nitric acid, with the application of heat, gives a yellow precipitate that changes to orange when, after cooling, ammonia is added. Other tests would confirm our conclusion that the four substances with which we are working all belong to the same class—the proteids.

The proteids are the most complex substances with which we have to do in our foods, and they are the most important.

Food has several functions to perform in the body. It builds new tissue, repairs the waste that is constantly going on, and gives heat, partly utilized as heat, and partly transformed into another form of energy, giving power to work. For performing all of these functions we depend upon five classes of food, often called the five food principles. They may be classified as follows:

CLASSIFICATION OF FOODS

Organic	Nitrogenous:	Proteids and allied compounds.
	Non-nitrogenous:	Carbohydrates, Fats.
Inorganic	Water, Mineral matter.	

Of all these principles, proteids and the closely allied substances alone contain nitrogen, that most important element for the maintenance of the body functions and for building of tissue. It seems a strange thing and unlike the usual economy of nature that when nitrogen is absolutely necessary to life, and when it exists freely in such large amounts in the air about us, we are yet unable to utilize this free nitrogen in our bodies. Not only animals but plants, with the exception of a few which have the power by the aid of bacteria of "fixing nitrogen" from the air, must depend upon their food for this necessary element.

The proteids can also act as fuel-foods and give the required heat and energy, while the carbohydrates and fats, though excellent fuel-foods, are useless as builders and repairers, except of fatty tissue.

The proteids that we have been examining are representatives of a very large class, occurring in vegetable as well as animal substances. They all contain nitrogen, carbon, hydrogen, oxygen, and a small amount of sulphur, while many also contain phosphorus.

The chief sources of proteids in our food supply are the various meats and fish, eggs, milk, and its product, cheese, the grains, and the leguminous plants, such as peas, beans, and lentils.

(To be continued.)

SCHOOL NURSING IN NEW YORK CITY

By LINA L. ROGERS
Supervising School Nurse

The school nurse has been presented in many and various lights to the public and not a few good articles have been written about her, but whether the actual work accomplished by the school nurse is known or not is a doubtful question.

The work done in the schools is probably the least important part, as the possibilities of what may be done in the homes is very great.